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Patent Search

Invention Title	A SILVER NICKEL NANOFERRITES COMPOSITIONS FOR ANTIFUNGAL APPLICATION AND METHOD THEREOF
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Abstract:

ABSTRACT The present invention describes a silver nickel Nanoferrites compositions for antifungal application and method thereof. This nano particle has the power to penetrate bacterial cell walls, alter the composition of cell membranes, or even cause cell death. As a result, silver (Ag) nanoparticles have potent antibacterial properties even at low concentrations. The aloe-vera extract served as the fuel in the green synthesis process used to create the silver doped Ni nanoparticles. To increase the antifungal properties of Nickel nanoparticles against the human disease C. albicans, Ag (silver) was doped in Nickel. Studying the magnetic, structural, and antimicrobial properties of the Ag doped Nick (Ag_{0.6}Ni_{0.4}Fe₂O₄) nanoparticles is the main goal of this work.

Complete Specification

DESC:FIELD OF INVENTION:

This invention generally relates to the field of the nickel Nanoferrites compositions development and synthesis techniques, and more particularly relates to a silver nickel Nanoferrites compositions for antifungal application and method thereof.

BACKGROUND OF THE INVENTION

There are various types of antimicrobial medicines available in the market with different compositions. These medicines having nanoparticles, which penetrate the cell wall of bacteria and stop its growth and even kills these bacteria. These are mostly preferred on the wounds to protect from the contaminated environment. These medicines take lots of time to heal to wounds. Keeping this in view, we have synthesized Ag doped Ni nanoferrites with better antimicrobial properties. In general, a variety of synthesis techniques, including co-precipitation, combustion, sol-gel, citrate precursor, and green synthesis method, are employed to create nanoparticles. Because NiFe₂O₄ exhibits better antifungal characteristics and has a moderate saturation magnetization value, it was chosen for this study. Because silver has a wide variety of antibacterial, antiviral, and antifungal activities, Ag nanoparticles were chosen.

There are few references for the present invention as given below:

Title: The synthesis and characterisation of curcumin loaded Ag (1-X) Ni X Fe₂ O₄ for drug delivery.

Abstract: A simple procedure of solvothermal synthesis of Silver doped Nickel ferrite nanoparticle is described in this paper for the application of drug delivery. The microwave absorption and SERS phenomena of silver nanoparticles and water-absorbent property of the polymer material such as polyethylene glycol (PEG) to bypass fast identification by the antibodies are made use in the synthesis of Ag-doped nickel ferrite with PEG as a solvent. The ferrite sample was distinguished using XRD, FTIR, SEM.

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